



```
[225]: a.keys()

[225]: dict_keys(['model', 'clr', 'place'])

[226]: #11 sort dictionary by values

[229]: b=a.values()

[233]: c=list(b)

[234]: c

[234]: ['f', 'black', 'goa']

[235]: c.sort()

[236]: c

[236]: ['black', 'f', 'goa']

[237]: c.reverse()

[238]: c

[238]: ['goa', 'f', 'black']

[239]: # union of List 10
```

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```
't': 1,
'h': 1,
'o': 1}

[ ]: #8.to reverse list at specific point

[27]: a=['abc','xyz','aba','1221','1223']

[25]: a[-3::-1]

[25]: ['aba', 'xyz', 'abc']

[33]: a=['mom','lol','sir']

[28]: a='moon'

[29]: a[0:]

[29]: 'moon'

[32]: a[::-1]

[32]: 'noom'

[42]: for i in a:
        if i[0:]==i[::-1]:
            print('palindrome')
        else:
```

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[32]: 'noom'

```
[42]: for i in a:
      if i[0:]==i[::-1]:
          print('palindrome')
      else:
          print('not')
```

palindrome
palindrome
not

[46]: #sum of items in list

[52]: a=[1,2,3,4,5]

[53]: sum(a)

[53]: 15

[114]: a={'model':'f','clr':'black','place':'goa'}



[115]: b=list(a.items())

[117]: b.sort()

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```
[118]: list(b)

[118]: [('clr', 'black'), ('model', 'f'), ('place', 'goa')]

[86]: c=b[::-1]

[87]: dict(c)

[87]: {'place': 'goa', 'model': 'f', 'clr': 'black'}

[119]: # sum of values in dict 13

[120]: a={'model':5,'clr':6,'place':7}

[121]: sum(a.values())

[121]: 18

[ ]:
```

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```
[78]: 1
[78]: 1
[79]: a=[1,2,3,4,5,6]
[87]: a[1]
[87]: 2
[89]: type(a)
[89]: list
[90]: a
[90]: [1, 2, 3, 4, 5, 6]
[144]: a=['orange','banana','apple','l']
[95]: a.sort()
[96]: a
[96]: ['apple', 'banana', 'orange']
[99]: 2.to count no. of strings and string length is 2 or more and 1st and last character same
```

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```
[99]: 2.to count no. of strings and string length is 2 or more and 1st and last character same
```

```
[99]: 2
```

```
[ ]:
```

```
[176]: for i in a:
        print(i,type(i))
        for i in a:

            if len(i)>=2:
                print('words with string lenth 2 or more')
                print      ( i,len(i))

b=len(a)
print('no. of strings is')
print(b)
```

```
orange <class 'str'>
banana <class 'str'>
apple <class 'str'>
l <class 'str'>
words with string lenth 2 or more
orange 6
words with string lenth 2 or more
banana 6
words with string lenth 2 or more
```

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[198]: *#prgrm to find if key already there in dictionary 12*

[199]: `a={'model':'f','clr':'black','place':'goa'}`

[207]: *#given key=model*

[208]: `'model' in a`

[208]: True

[211]: `'brand' in a`

[211]: False

[212]: *# to sum all values in a dictionary 13*

[214]: `b=a.values()`

[215]: `list(b)`

[215]: `['f', 'black', 'goa']`

[]: *#squares in dict 14 for i<10*

[123]: `{i:i**2 for i in range(1,11) if i<10}`

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```
[211]: 'brand' in a
[211]: False
[212]: # to sum all values in a dictionary 13
[214]: b=a.values()
[215]: list(b)
[215]: ['f', 'black', 'goa']
[ ]: #squares in dict 14 for i<10
[123]: {i:i**2 for i in range(1,11) if i<10}
[123]: {1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81}
[224]: #sort a dict by keys 15
[225]: a.keys()
[225]: dict_keys(['model', 'clr', 'place'])
[226]: #11 sort dictionary by values
```

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```
[238]: c
[238]: ['goa', 'f', 'black']
[239]: # union of List 10
[44]: a=['abc','xyz','aba','1221']
      b=['model','car','year','aba']
[247]: a.extend(b)
[248]: a
[248]: ['abc', 'xyz', 'aba', '1221', 'model', 'car', 'year', 'aba']
[243]: # 10 intersection
[45]: [i for i in a if i in b]
[45]: ['aba']
[ ]:
[ ]:
[ ]:
```

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```
[ ]:
[ ]: # 4 to remove duplicates from a list
[1]: a=['abc','xyz','aba','1221','1221']
[273]: type(a)
[273]: list
[274]: set(a)
[274]: {'1221', 'aba', 'abc', 'xyz'}
[275]: # to create dict from string
[287]: a={'abc':'alpha'}
[288]: type(a)
[288]: dict
[291]: b='learnpython'
[293]: {i:b.count(i) for i in b}
[293]: {'l': 1,
      'e': 1,
```

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